Conference of the Specialists for Refractories of   SCV/131-58-7-12/14
the Moscow Oblast

the low technical level of these works. Other reports were
delivered by:

1) V.I.Sokolov and I.G.Ul'fskiy on the mechanization plans, on
   the automation of production processes, as well as on the
   modernization of the Leningrad Institute for Refractories.

2) K.A.Krasotin, D.S.Rutman and I.A.Suvorov on the modernization
   and mechanization of the Podol'sk works by its laborers and
   staff.

3) L.V.Vinogradova on highly-refractory products.

4) D.N.Poluboyarinov, Professor, Doctor of Technical Sciences,
   on the oxides of various metals used for the production of
   refractories.

5) M.I.Gurova and M.I.Krivoy on the introduction of new refrac-
   tories in the Snigirevskiy works.

6) M.A.Rabinovich on measures taken for improving the work of
   the heating aggregates at the Snigirevskiy works.

7) T.A.Reyngard on improvements in the Vnukovo works.

8) M.F.Shcheglova on rationalization work in the Domodedovo works.

9) Z.Ye.Dobrin on experiments at the Borovichi kombinat for
   refractories.

Card 2/3

Conference of the Specialists for Refractories of   SOV/ 131-58 7-12/14
the Moscow Oblast

      10)M.P.Dovnar on the dust removal in the Stalinogorsk works.
      11)S.D.Skorokhod on demands set up by the metallurgists of
         the "Elektrostal' " works concerning refractories.
      The participants approved of the measures outlined by the Moscov/
      Oblast   Council of National Economy to be taken for a further
      perfection and an increase of the production of the works in
      the   area. It was recommended to intensify research work.

      1. Ceramic materials--USSR   2. Conferences

Card 3/3

SHCHEGLOVA, M.I., mladshiy nauchnyy sotrudnik

Investigating the elbow and the conical bell mouth as water meters in the PG35M and PG35X2pumps of the Central Asia Scientific Research Institute of Irrigation. Trudy SANIIRI no.106:47-59 '60.
(MIRA 14:5)
(Water meters)   (Pumping machinery)

SHCHEGLOVA, M. K.

"Variability of Typhoid-Paratyphoid Bacteria," Avtoreferaty Dokladov 19-y Nauchnoy Sessii Saratovskogo Gosudarstvennogo Med. Inst., Saratov, 1952, pp 151, 152.

SHCHEGLOVA, M.K.

Variability of typhoid and paratyphoid bacteria. Zhur.mikrobiol.epid.
i immun. no.4:78 Ap '54.   (MLRA 7:5)

1. Iz kafedry mikrobiologii Saratovskogo meditsinskogo instituta.
      (Typhoid fever) (Paratyphoid fever) (Bacteria, Pathogenic)

SHCHEGLOVA, M. K.,   KHINCHUK, A. G.,   KUSINA, YE. P.,   FEYGEL'SON, A. S.

"On the mechanism of the therapeutic effect of penicillin and syntomycin in an experiment."

report submitted at the 13th All-Union Congress of Hygienists, Epidemiologists and Infectionists, 1959.

SHCHEGLOVA M. K.

Antibiotic action on the causative agent of listerellosis. Anti-
biotiki, 4 no.2:53-57 Mr-Ap '59.   (MIRA 12:7)

1. Kafedra mikrobiologii (zav. - prof. S.I. Sherishorina) Saratovskogo
meditsinskogo instituta.
            (LISTERIA, eff. of drugs on
                 chloramphenicol, chlortetracycline, penicillin & streptomycin
                 (Rus))
            (CHLORAMPHENICOL, eff.
                 on Listeria (Rus))
            (CHLORTETRACYCLINE, eff.
                 same)
            (PENICILLIN, eff.
                 same)
            (STREPTOMYCIN, eff.
                 same)

SHISHOVY, Marina Konstantin ovna

Action of penicillin on (gonococcus) staphylococcus.

Dissertation for candidate of medical science in med.
Chair of microbiology (head prof. S... Cherishorina) Saratov Medical
Institute, 195.

SHCHEGLOVA, M.K.

Influence of penicillin on the virulence of Staphylococcus.
Trudy Sar. gos. med. inst. 26:197-201 '59.   (MIRA 14:2)

1. Saratovskiy meditsinskiy institut, kafedra mikrobiologii
(zav. - prof. S.I. Sherishorina).
            (STAPHYLOCOCCUS) (PENICILLIN)

SHCHEGLOVA, M.K.

Listerella bacteriophage. Report No. 1. Trudy Sar. gos. med.
inst. 26:230-232 '59.   (MIRA 14:2)

1. Saratovskiy meditsinskiy institut, kafedra mikrobiologii
(zav.- prof. S.I. Sherishorina).
        (LISTERELLA) (BACTERIOLOGY—CULTURES AND CULTURE MEDIA)
                    (BACTERIOPHAGE)

SHCHEGLOVA, M.K.

Some properties of a Listeria bacteriophage. Zhur. mikrobiol.,
epid. i immun. 33 no.1:99-102 Ja '62.   (MIRA 15:3)

1. Iz Saratovskogo meditsinskogo instituta.
            (LISTERELLA)   (BACTERIOPHAGE)

S/052/61/006/004/004/005
C111/C222

/b.6200

AUTHORS: Bol'shev, L.N., Gladkov, B.V., Shcheglova, M.V.

TITLE: Tables for calculation of B and Z-distribution functions

PERIODICAL: Teoriya veroyatnostey i yeye primeneniye, v. 6, no. 4, 1961,
446 - 455

TEXT: Tables I and II for the determination of the B and Z - distribution
functions $I_x(p,q)$ and $F_{2p,2q}(z)$ are given on four pages. The tables
complement the tables given by K. Pearson (Ref. 3 : Tables of the In-
complete Beta-function, Biometric Laboratory, London, 1934). The figure

Card 1/4

Tables for calculation of B   ...

S/052/61/006/004/004/005
C111/C222
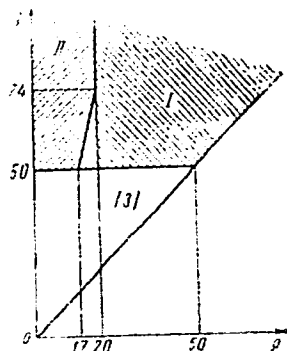
shows the regions of the (p,q) - plane in which tables I,II and those of (Ref. 3), respectively, are to be used. Table I gives the values of $10^5 f_1(u,v)$ and $10^5 f_2(u,v)$, where f_1 and f_2 are the correction terms

Card 2/4

S/054/6 /006/004/004/005

Tables for calculation of B . .

in the f rm..

$$I_x(p.:) - \ldots \quad \ldots \quad \emptyset(u) + \psi_1(u,v) + \pi^2 \psi_2(u,v) + O(\sqrt{v \cdot x^3}) \quad (1)$$

of J. W .... An approximate formula for the cumulativ distribution. Ann. Ma .. tistics, 23. 2 (1937). 504-510). Table II .... the values of y j .. the formula

$$I_f(p.:) \ldots \quad q^{(2)} = I(y,p) + \frac{\ldots}{6(2q+p-1)^2} f(y,p) + O(\ldots^1) \quad (6)$$

of L.N. ...shev (ref. 10 : Ob tsenkakh veroyatnostey 'On estimates of probab. es). Teoriya veroyat. i yeye primen., V. 4 1960:, 453-457).

The r ... sulting from using the tables is not larger than $5 \cdot 10^{-5}$.
The p ...bility of using the tables to calculate the binomial distr:... s mentioned.

Menti... ... Kolmogorov. Academician.

Card 3/4

Tables : [illegible] tion of B ...   5/052/61/006/004/004/005
                                            [illegible]/C222

There are [illegible] figures, 5 Soviet-bloc and 6 non-Soviet-bloc
references. The references to English language publications read as
follows : K. Pearson, Tables of the Incomplete Beta-function, Biometric
Laboratory, London 1934 ; Tables of the Binomial Probability
Distribution, National Bureau of Standards, Applied Mathematics Series 6,
Washington 1950 ; H.G. Romig, 50-100 Binomial Tables, New York, John
Wiley & Sons, Inc. London, Chapman & Hall, Limited, 1953 ; J. Wishart,
An approximate formula for the cumulative z-distribution, Ann. Math.
Statist. [illegible] 304, 510.

SUBMITTED: June [illegible]

Card 4/4

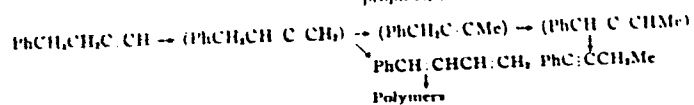BOL'SHEV, L.N.; GLADKOV, B.V.; SHCHEGLOVA, M.V. (Moscow)

Tables for calculating F   distribution functions. Teor,
veroiat. i ee prim. 6   446 455 ' .   (MIRA 14:11)
(Probab. .   es.   etc.)

Isomerization of unsaturated hydrocarbons in contact with metallic oxides   V   Isomerization of 4-phenyl-1-butene and 5-phenyl-1-pentene on oxides of aluminum and chromium.   R. Ya. Levina and N. A. Shchegloya. J. Gen. Chem. (U. S. S. R.) 11, 527-33(1941), cf. C. A. 35, 2170[?]   One of the authors previously reported the isomerization of allyl-substituted aromatic hydrocarbons in contact with oxides of Al, Cr and Fe, as well as with Pt and Pd, at the low temps. of 200-300°, with a double-bond shift from the gamma to the beta position; a shift to the alpha position was reported on a Pt surface. In the present work the latter type of isomerization was studied on the surfaces of oxides of Al and Cr. 4-Phenyl-1-butene was passed over Al₂O₃ at the rate of 0.1 cc./min. in a weak stream of CO₂ at 250° (a few expts. at 225° and 300°). The condensate yielded a fraction, b₅ 71-4°, n²⁰ 1.5375; dibromide, m. 69.5-70.5° (from EtOH). In further expts. the hydrocarbon was passed under similar conditions over Cr oxide at 250° (1 run at 225°); after fractionating and recycling of the product over Cr oxide the main fraction of the condensate had the properties of 4-phenyl-1-butene, b₅ 65.5-66°, n²⁰ 1.5378, d²⁰ 0.9000; dibromide m. 70-1°. These expts. show the isomerization with double-bond shift from the 1- to the 3-position. Treatment as above of 5-phenyl-1-pentene (from CH₂·CHCH₂Cl and PhCH₂CH₂MgBr) at 250° on

Cr oxide yielded 5-phenyl-4-pentene, b₅ 99-101°, n²⁰ 1.5330, d²⁰ 0.9025; dibromide, m. 60-1.5°. The latter hydrocarbon was synthesized by reaction of BzH with BuMgBr followed by dehydration of the carbinol by Al₂O₃ at 300-350°, b₅ 99-100°, n²⁰ 1.5300, d²⁰ 0.9025; dibromide, m. 61-2°. Comparison of the phys. properties of the isomerized and synthetic hydrocarbons established their identity. Thus, in this case a 1-double bond was shifted to a 4-position, an isomerization not previously reported in the literature. In both cases it should be noted that the final position of the double bond is that of conjugation with the benzene ring. VI. Isomerization of 4-phenyl-1-butyne on chromium oxide. R. Ya. Levina and E. M. Panov. Ibid. 533-6. The previous work on the isomerization of the double bond in alkylated benzenes was extended to the acetylenic compds. In the present work the isomerization of 4-phenyl-1-butyne in contact with Cr oxide at 250° was investigated. The starting material was synthesized by bromination of the corresponding ethylenic compd., followed by dehydrohalogenation with NaNH₂. The hydrocarbon was passed over Cr oxide at the rate of 0.1 cc. min. in a weak stream of CO₂. Considerable difficulty was experienced because of polymer formation. The distillate (25-30% of the original) was purified by AgNO₃ treatment and the unreacted portion on distn. yielded a hydrocarbon, C₁₀H₁₀, b₅ 78-80°, n²⁰ 1.5482, d²⁰ 0.9235. 4-Phenyl-3-butyne was then prepd. from EtI and PhC:CNa, b₅ 80°, n²⁰

over

1.5180, d⁴ 0.9251. To establish the identity of the 2 hydrocarbons both were oxidized by identical treatment with KMnO₄ to yield BzOH. The only other hydrocarbons C₁₀H₁₀ capable of yielding BzOH on such oxidation are 1-phenyl-1,3-butadiene and 1-phenyl-1,3-butadiene, both of which have phys. consts. entirely different from those of the hydrocarbons in question. However, it is highly probable that the polymers formed during the isomerization were those of 1-phenyl-1,3-butadiene. The proposed reaction scheme is:

PhCH₂CH₂C:CH → (PhCH₂CH:C:CH₂) → (PhCH₂C:CMe) → (PhCH:C:CHMe)

PhCH:CHCH:CH₂ PhC:CCH₂Me

Polymers

G. M. Kosolapoff

CA

Kinetics and mechanism of reaction of the catalytic hydro-dehydrogenation II. Kinetics of disproportionation of hydrogen in cyclohexene on a platinum catalyst. N. A. Shcheglova and M. Ya. Kagan. Zhur. Fiz. Khim. 23, 1083-94 (1949).—It was assumed by Kagan and Flid (C.A. 40, 6059) that conversion of cyclohexene (I) into benzene and cyclohexane (II) (1:2 mol.) was an essential part of the reaction II → benzene. This conversion is now studied. Mixts. of I with x mol. N₂ were passed over 1 g. of pumice stone contg. 4% Pt. A new portion of the catalyst was used for every expt., because the activity of the catalyst was lowered by use. A catalyst regenerated by N₂ + 2% O₂ at 100-250° and then H₂ was more active than the original sample. When x varied between 5 and 20, the concn. c of I between 0.0018 and 0.0050 mol./l., the duration of the expt. between 1 hr and 17 hrs., and the no. (n) of g.-mols. of I traversing the catalyst per sec. between 10⁻⁴ and 10⁻⁶, the product na remained const.; a is the degree of conversion detd. by analysis of the reaction product for I. With fresh catalyst, na was 0.36 × 10⁻⁶, 0.74 × 10⁻⁶, and 1.47 × 10⁻⁶ at 105°, 115°, and 124°, resp., giving 22,000 cal. for the energy of activation. The const. k of the zero-order equation dc/dt = k is na/v, v = the vol. of voids in the catalyst. The pre-exponential factor in the Arrhenius equation was 1.9 × 10⁸. Addn. of benzene and or II to the N₂-I mixts. did not affect na; this showed that I is adsorbed preferentially to benzene and II. The surface of the catalyst is permanently covered with I mols causing the reaction to be of zero order.   J. J. Bikerman

Fib Heterogeneous catalysis, Karpov Phys Chem Inst, Moscow

C A

2

Kinetics and mechanism of the reactions of the catalytic hydro-dehydrogenation. III. Dehydrogenation of cyclohexane on a platinum catalyst. M. Ya. Kagan and N. A. Shcheglova. *Zhur. Fiz. Khim.* 23, 1203-14(1949); cf. *C.A.* 44, 9106. –Cyclohexane (I) or its mixts. with benzene, II, or N were passed through plugs of 3 g. of the catalysts (4%, Pt on pumice) used for conversion of cyclohexene (III), and the vol. of H liberated and the ratio I: benzene in the condensate were detd. The efficiency of the catalysts did not change at 200°, but at 292° it fell after each expt. and the catalyst had to be regenerated by a N + 2%, O at 350° and then by H at 200°. If r sec. is the time spent by the gas mixt. in the catalyst plug, and x the fraction of I converted into benzene, the reaction const. $k = (1/r)[\ln(1-a)+3x]$, the vol. I and x appear because 4 mols. form from 1 mol. I. For the most active catalyst, k at 292° was 0.3 sec.$^{-1}$; k was not altered by dilg. I with other gases. The rate of dehydrogenation is 1/1500 that of disproportionation of II; hence, if II is an intermediate in the reaction I → benzene, it is consumed in the disproportionation rather than in the dehydrogenation reaction. This was confirmed by expts. with mixts. of I and II in which II was completely consumed at r giving only low conversion of I, and the vol. of H liberated corresponded to the I converted. Presumably, the reaction proceeds as follows: 3I → 3III → 2I + benzene.   I. J. B.

SHCHEGLOVA, N. A.

USSR/Chemistry - Physical chemistry

Card 1/1   : Pub. 147 - 13/21

Authors   : Pshezhetskiy, S. Ya.; Lyubarskiy, G. D.; Shcheglova, N. A.; and
                 Merilyaynen, S. K.

Title   : Relation between the kinetics of catalytic dehydrogenation of hydro-
                 carbons and the structure of the latter. Part 3.- Comparison of kine-
                 tics data for n-butane and n-butylene; probable mechanism of dehydro-
                 genation reaction

Periodical   : Zhur. fiz. khim. 8, 1458-1464, Aug 1954

Abstract   : The difference between the reaction of n-butane and n-butylene dehy-
                 drogenation kinetics and the reaction of these hydrocarbons with the
                 catalyst was established by comparing kinetics data. The presence of
                 a double C=C bond in the butylene molecule was considered to be the
                 basic cause for a more intensive reaction of this hydrocarbon in com-
                 parison with that of n-butane. The formation of intermediate surface
                 compounds of the adsorbed radical type and consequent separation of
                 the second H-atom was thought to be the most probable reaction mechan-
                 ism. Three references: 2-USSR and 1-USA (1948-1954). Tables; graphs.

Institution   : The L. Ya. Karpov Physico-Chemical Institute, Moscow

Submitted   : November 13, 1953

SHCHEGLOVA, N. A.

USSR/ Chemistry   Physical chemistry

Card   : 1/1   Pub. 147 - 15/25

Authors   : Shcheglova, N. A., and Pshezhetskiy, S. Ya.

Title   : Kinetics of dehydrogenation of n-butylene

Periodical   : Zhur. fiz. khim. 28/7, 1280 - 1285, July 1954

Abstract   : The kinetics of butylene dehydrogenation reaction over an aluminum-
                chromate catalyst, was investigated at 450 - 500° and partial butylene
                pressures of 0.05 - 0.3 atm. Equation, describing this dehydrogenation
                reaction kinetics, is given. The thermal effect of this reaction, as
                result of conjugation of double bonds, is ∼ 26000 cal./mol., i.e.,
                somewhat lower than the thermal effect of butane dehydrogenation
                reaction. The effect of butadiene additions on the rate of butylene
                hydrogenation, is explained. Two USSR references (1946 and 1954).
                Tables; graphs.

Institution : The L. Ya. Karpov Physico-Chemical Institute, Moscow

Submitted   : November 13, 1953

Shcheglova, N. A.

4529. THE RELATION OF HYDROCARBON STRUCTURE AND THE KINETICS OF CATALYTIC DEHYDROGENATION. Pshezhetskii, S. Ya., Lyubarskii, G. D., Shcheglova, N. A. and Marilyainen, S. K. (Moscow: Acad. Sci. U.S.S.R., 1955. Problems of Chemical Kinetics, Catalysis and Reactivity (Voprosy Khimicheskoi Kinetiki, Kataliza I Reaktisonnol Sposobnosti)", 535-547; abstr. in Chem. Abstr., 1956, vol. 50, 10387). It was found that the kinetics of the dehydrogenation of n-butane are represented by a different equation than those of n-butylene, and that considerable differences exist in the apparent activation energy values for the two compounds. These variations point to a considerable difference in the interaction with the catalyst, and the much more energetic action of n-butylene is apparently due to its double bond. The available data indicate that the probable mechanism of this reaction includes the formation of intermediate surface compounds, similar to free radicals, followed by the splitting off of the second hydrogen. Kinetic equations derived from such a scheme, and an effective uniformity of the catalyst surface, are in satisfactory agreement with experimental data.

SOV/20-120-6-21/59

AUTHORS: Shigorin, D. N., Shcheglova, N. A.,
Nurmukhametov, R. N., Dokunikhin, N. S.

TITLE: The Effects of the Position and of the Nature of the Sub-
stituent on the Fluorescence Spectra of Anthraquinone Deriv-
atives in Frozen Solutions(Vliyaniye polozheniya i prirody
zamestitelya na spektry fluorestsentsii proizvodnykh antra-
khinona v zamorozhennykh rastvorakh)

PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol 120, Nr 6,
pp 1242 - 1245 (USSR)

ABSTRACT: First a survey of previous papers and of the present state
of the problem under review is given. This is a study of the
fluorescence of much diluted solutions ($C = 10^{-4}$ to 10^{-5} mol/l)
of anthraquinone and of its derivatives at $77°K$. n -heptane,
n -hexane and n -octane served as a solvent. The spectra were
excites by a group of mercury lines. A fine structure of the
oscillations was found in the fluorescence spectra of anthra-
quinone, of its β-derivatives (β-Cl-anthraquinone, β-methyl
anthraquinone, β-amino anthraquinone) and of anthrone. The
spectrum exhibited by anthraquinone in different solvents remains

Card 1/3

The Effects of the Position and of the Nature of the   SOV/2o-12o-6-21/59
Substituent on the Fluorescence Spectra of Anthraquinone Derivatives in
Frozen Solutions

the same. It has 24 - 28 lines and shows a complicated structure.
The spectrum of anthraquinone apparently is divided into
several parts by the most intensive electron oscillatior bands.
The shape of the spectrum is repeated in each of these p..ts.
These principal bands are divided into several components. When
hexane is used instead of octane the number of components and
the nature of the splitting-up is changed, the position of the
bands and the distances between them are maintained. The
principal form of the spectrum is maintained in the spectra
of all compounds with a fine structure. It exhibits a three
times repeated picture in the ranges between the intensive
bands. The spectra of the α derivatives of anthraquinone are
markedly shifted towards red as compared to the spectra reviewed
above. They appear in the form of rather washed-out bands. The
spectrum of β-oxy anthraquinone also consists of washed-out
bands and is shifted towards red. The evidence advanced sub-
stantiates the hypotheses concerning the influence of the
position of the substituent and of its nature upon the
Card 2/3   fluorescence spectra of the molecules under consideration.

The Effects of the Position and of the Nature of the   SOV/20-120-6-21/59
Substituent on the Fluorescence Spectra of Anthraquinone Derivatives in
Frozen Solutions

There are 2 figures, 1 table, and 7 references,   which
are Soviet.

PRESENTED: March 27, 1958, by A. N. Terenin, Member, Academy of
              Sciences, USSR

SUBMITTED: March 21, 1958

1. Anthracene solutions—Fluorescence   2. Anthracenes—Spectra
3. Anthracenes—Structural analysis

Card 3/3

CHIGORIN, D. N.; SHCHEGLOVA, N. A.; and NURMUKHAMETOV, R. N.

"Fluorescence Spectra of Anthraquinone and its Derivatives in Frozen Solutions."

report presented at the 4th International Meeting of Molecular Spectroscopy, Bologna, Italy, 7-12 Sept 1959.

Institute of Physical Chemistry, the University, Moscow.

24(7)

SOV/48-23-1-8/36

AUTHORS: Shigorin, D. N., Shcheglova, N. A., Nurmukhametov, R. N.

TITLE: Influence of the Position and Nature of the Substituent Upon
             the Fluorescence Spectrum of Anthraquinone Derivatives in
             Frozen Solutions (Vliyaniye polozheniya i prirody zames-
             titelya na spektry fluorestsentsii proizvodnykh antrakhinona
             v zamorozhennykh rastvorakh)

ABSTRACT: In the present paper the authors studied the fluorescence
             spectra of strongly dilute solutions of anthraquinone and
             its derivatives at $77^{\circ}K$. n-hexane, n-heptane and n-octane
             were used as solvents. The spectrum investigations were
             carried out according to the method described by Shpol'skiy
             (Ref 1). The oscillation microstructures of the fluorescence
             spectra of anthraquinone and its β-derivatives: β-chloro,
             β-methyl and β-amino anthraquinone were considered. The
             anthraquinone spectrum covers a few intense principal bands
             which reappear in each spectrum. Each band is split into
             several components. On the transition from hexane to octane,
             the number of components and way of distribution vary,

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Influence of the Position and Nature of the Substituent   SPV 48-27-1-8/36
Upon the Fluorescence Spectrum of Anthraquinone Derivatives in Proper
Solutions

whereas the position of the bands is maintained. It was
observed that all spectra tend toward equalizing the in-
tensity of the components of the central bands during the
shift toward the long-wave range. The components of the
intense bands correspond to the completely symmetrical
C=O oscillation in the ground state of electrons. The
nature of distribution of the electron-vibration level
is connected with the orientation of fluorescent molecules
in the crystal lattice of the solvent and has hitherto
been investigated insufficiently. The α-derivatives of anthra-
quinone yield different spectra. Within the red range
they are shifted to a large extent and their bands are
indistinct. The authors investigated the spectra of
α-oxy anthraquinone, α-chloro anthraquinone, 1,5-dioxy
anthraquinone, 1,8-dioxy anthraquinone, 1,4-dioxy-
anthraquinone and β-oxy anthraquinone. The latter β-deriva-
tive belongs also to this group because of its hydrogen
bond that is produced in weak concentrations. This hydrogen
Card 2/3   bond renders the spectra of the α-derivatives of anthra-

Influence of the Position and Nature of the Substituent   SOV/45-23-1- ,36
Upon the Fluorescence Spectrum of Anthraquinone Derivatives in Frozen
Solutions

quinone indistinct. It always occurs in such cases where an
interaction between the substituents OH or NH_2 and the

C=O group is possible. The data obtained on the fluorescence
of frozen solutions of anthraquinone and its derivatives are
parallel to those mentioned by Karyakin and Terenin (Ref 3)
on the investigations of fluorescence extinction by oxygen
as well as to the changes in the electronic and infrared
absorption spectra of anthraquinone derivatives. There are
4 figures, 1 table and 4 Soviet references.

Card 3/3

SHIGORIN, D.N.; SHCHEGLOVA, N.A.; DOKUNIKHIN, N.S.

Luminescence spectra of halide derivatives of anthraquinone in frozen solvents. Izv.AN SSSR 24 no.6:778-781 Je '60.

(MIRA 13:7)

1. Fiziko-khimicheskiy institut imeni L.Ya.Karpova.
(Anthraquinone--Spectra).

81416

S/020/60/132/06/41/068
B004/B005

5 4/30

AUTHORS: Shigorin, D. N., Shcheglova, N. A., Dokunikhin, N. S.,
Puchkov, V. A.

TITLE: The Nature of the Hydrogen Bond and Its Influence on the
Electron Spectrum of Molecules

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol. 132, No. 6,
pp. 1372 - 1375

TEXT: In the introduction, the authors discuss data published on the
influence of the hydrogen bond on the vibration spectra of molecules,
mentioning papers by N. D. Sokolov (Ref. 1) and A. N. Frumkin (Ref. 5).
Then, they investigate tne coplanar system of α-nydroxy anthraquinone
in which a π-electron interaction takes place, and the C=O group is
decisive for the electron excitation. The authors assume the formation
of a quasiaromatic ring by means of the H-bond (Fig. 1). The investiga-
tion of the electron vibration spectra of this compound and some of its
derivatives yielded the valence vibration of the C=O group in the basic
state. On absorption of a light quantum, a change in the distribution of

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81416

S/020/60/132/06/41/063
B004/B005

The Nature of the Hydrogen Bond and Its
Influence on the Electron Spectrum of Molecules

the electron density, of the interatomic distances, etc. occurs which may
lead to a solidification of the ring containing the H-bond (O-H....O=C).
In the excited state, the action of the p-orbit of the H-atom becomes more
probable. The rate of transformation of electron energy into vibration
energy, and the probability of a redistribution of vibration energy on
sublevels increase in this connection. The life of each excited vibration
is reduced, and the luminescence spectra of the compounds containing the
H-bond have a blurred fine structure. This is confirmed by the
luminescence spectra of 1-hydroxy-, 1,4-, and 1-5-hydroxy anthraquinone
which in fact show no fine structure (Fig. 2, insert after p. 1341). The
luminescence spectra of α-methyl-, α-methoxy-, and α-phenyl anthraquinone
(Fig. 2) having no H-bond show a fine structure. The data of the spectra
are compiled in Table 1. The difference between absorption- and emission
spectra is discussed; it is explained by the circumstance that the
structure of the molecule and its electronic state change with the
absorption of the energy quantum $h\nu_{abs}$; this change is only eliminated
after emission of the light quantum $h\nu_{emiss}$. In substances with H-bond,
the excited electron level formed after absorption of $h\nu_{abs}$ is not

Card 2/3

81416

The Nature of the Hydrogen Bond and Its Influence   S/020/60/132/06/41/068
on the Electron Spectrum of Molecules   B004/B005

identical with the electron level at which emission begins (Fig. 3).
Coplanarity is a condition for the occurrence of such intramolecular
bonds. The increased interaction of a bridge with H-bond on the basis of
9-(p-hydroxy-)-phenyl acridine investigated by A. N. Terenin and
V. V. Shablya (Ref. 13), and the important role of these phenomena in
migration processes of the energy in high-molecular compounds (polyamides,
protein, etc.) are pointed out. Levshin's law of mirror symmetry is
mentioned. There are 2 figures, 1 table, and 15 references: 14 Soviet,
1 British, and 1 US.

ASSOCIATION: Fiziko-khimicheskiy institut im. L. Ya. Karpova
              (Physical-chemical Institute imeni L. Ya. Karpov)

PRESENTED: February 11, 1960, by A. N. Terenin, Academician

SUBMITTED: February 14, 1960

Card 3/3

SHIGORIN, D.N.; SHCHEGLOVA, N.A.; DOKUNIKHIN, N.S.

Luminescence spectra of halo derivatives of anthraquinone
in frozen solutions. Dokl.AN SSSR 133 no.2:420-423
Jl '60.   (MIRA 13:7)

1. Fiziko-khimicheskiy institut imeni L.Ya. Karpova. Pred-
stavleno akademikom A.N. Tergninym.
                (Anthraquinone--Spectra)

$4,3500(1137,1138,1395)$

AUTHORS: Shigorin, D. N., Shcheglova. N. A., and Dokunikhin, N. S.

TITLE: Expressions of the autonomy of electron groupings in
               luminescence spectra of complicated molecules

PERIODICAL: Doklady Akademii nauk SSSR. v. 137, no. 6, 1961, 1416-1419

TEXT: A quantum-mechanical study of the electron levels of simple molecules
with multiple bonds has yielded the following results: 1) excitation is in
relation with the participation of π- and p-electrons of the chromogenic
group ($>C=C<$, $C=O$, etc.), on whose energetic state the substituents (auxo-
chromes) bear an influence. The authors of the present paper wanted to
clarify the problem as to whether the autonomy of electron groupings
(chromophores) appears both with absorption and with emission (luminescence).
The luminescence spectra of complicated molecules were examined, such as
anthraquinone (II), phenanthrene quinone (III), and anthrone (IV), as well
as thioindigo and its derivatives. The investigation was conducted at
concentrations of $10^{-4}-10^{-5}$ mole/l in n-paraffins. T = 77°K. Results are
presented in Fig. 1. For II, its α- and β-monohalogen-, α-methyl-, α-phenyl-

Card 1/6

Expressions of the ...

and α-methoxy derivatives, as well as for III and IV the following was
found: the distance between the intensive bands and the weak bands amounts
to 1664 cm^{-1} (for III and IV 1686 cm^{-1}) corresponding to the frequency of
stretching vibrations of the chromophore C=O group. For mesobenzanthrone,
its mono- and dibromo derivative, and for thioindigo the fine structure is,
in accordance with E. V. Shpol'skiy (UFN, 68, 51 (1959); 71, 215 (1960))
characterized by the frequencies of the symmetric vibrations of condensed
aromatic rings, and not by the frequencies of the stretching vibrations of
the C=O group, which, consequently, does not act as chromophore in these
compounds. It is inferred from the foregoing that an unequivocal autonomy
of electron groups (chromophores) appears both in the absorption and
luminescence spectrum of complicated molecules. These effects are best
observed at low temperatures, since at higher temperatures the spectrum
becomes unclear due to transformation of electron energy into vibrational
energy of the rings. For molecules with two chromophore groups at low
temperatures it has been noted that depending on the conditions of excita-
tion (λ, temperature, medium) either electron state, but also both spectra,
may be observed A further fact that confirms the conservation and the
strengthening of hydrogen bonds in α-hydroxy derivatives of anthraquinone in

Card 2/6

23857

S/020/61/137/006/012/020
B101/B201

Expressions of the ...

the excited state is the luminescence spectrum of 1, 4, 5, 8-tetrahydroxy
anthraquinone. Each C=O group participates in two H bonds, so that four
additional quasiaromatic rings, a quasi-corona
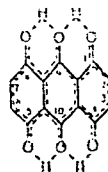
(X) forms.

The spectrum of this compound displays frequencies similar to those of the
corona as well as frequencies that are characteristic of anthracene. A
chromophore system is formed which comprises rings with H bonds, and in
which the frequencies of the stretching vibrations of the C=O groups are no
more determinative. The spectra of β-substituted anthraquinone (Br, I,
R-C-C=C) allow the conclusion to be drawn that (under adequate conditions of
excitation) the intensity of the Raman band of the chromophore (C=C) and the
intensity, corresponding to the 0" - 0' transition in the luminescence spec-
trum, change. To conclude: local, "multicentered" electron orbits may arise
with the participation of π electrons in complicated molecules. Academician
Card 3/6

23857

S/020/61/137/006/019/020
B101/B201

Expressions of the ...

A. N. Terenin is thanked for discussions. There are 1 figure and 11 refer-
ences: 10 Soviet-bloc and 1 non-Soviet-bloc. The reference to English-
language publication reads as follows: E. Y. Bowen, B. Brocklehurst. J.
Chem. Soc., 1954, 3875.

ASSOCIATION: Fiziko-khimicheskiy institut im. L. Ya. Karpova (Physicochemi-
cal Institute im. L. Ya. Karpov)

PRESENTED: November 9, 1960, by A. N. Terenin, Academician

SUBMITTED: November 2, 1960

Fig. 1. Luminescence spectra of anthraquinone derivatives in heptane at
77°K.
Legend: a) λ_{Hg} = 313 mμ; b) λ_{Hg} = 365 mμ; 1) a-chloroanthraquinone; 2) 1, 8-
dihydroxy anthraquinone; 3) 1,5-dihydroxy anthraquinone; 4) 1,4,5,8-
tetrahydroxy anthraquinone (A = emission; B = absorption); 5) anthrone (in
hexane), the ultraviolet part of the spectrum with λ_{exit} = 4043 A is not shown;

Card 4/6

SHCHEGLOVA, N.A., SHIGORIN, L.L.; DOKUNIKHINA, N.S.

Luminescence of monohalo derivatives of anthraquinone in frozen solutions. Zhur. fiz. khim. 36 no.9:1932-1946 S '62.

(MIRA 17:6)

1. Fiziko-khimicheskiy institut imeni L.Ya. Karpova, Moskva.

45146

S/076/63/037/002/010/018
B101/B186

AUTHORS: Shcheglova, N. A., Shigorin, D. N., Ryabchikova, T. S.,
             Dokunikhin, N. S., Moiseyeva, Z. Z. (Moscow)

TITLE: Study of the luminescence spectra of some anthraquinone
             carboxylic acid derivatives at low temperatures

PERIODICAL: Zhurnal fizicheskoy khimii, v. 37, no. 2, 1963, 371-377

TEXT: The luminescence spectra of the following compounds were studied in
n-hydrocarbon solutions or in the powder: anthraquinone-α-carboxylic acid
and its methyl ester, anthraquinone-β-carboxylic acid and its methyl ester,
anthraquinone-1,4-dicarboxylic acid and its dimethyl and diethyl esters,
7-chloro-anthraquinone-2-carboxylic acid and its methyl ester, 7-fluoro-
anthraquinone-2-carboxylic acid and its methyl ester, 6-fluoro-
anthraquinone-2-carboxylic acid and its methyl ester, and 6-chloro-
anthraquinone-2-carboxylic acid. Results: The luminescence spectra of
the esters and their halogen derivatives at 77°K have a fine vibration
structure. The carbonyl of the anthraquinone ring had the highest
frequency. The multiplicity of the spectra proved to be highly dependent
Card 1/2

Study of the luminescence ...

S/076/63/037/002/010/018
B101/B186

on the length of the hydrocarbon chain of the solvent (n-hexane, n-heptane, n-octane, n-nonane) which fact can be used in the analysis of these compounds. Each substituent being an auxochrome (F, Cl, COOH, $COOCH_3$) has

a specific effect on the spectrum, manifest in line shifts and intensity changes of the major peaks. The luminescence spectra of the powdered halogen derivatives of the acids as well as the esters had no fine structure at $77^\circ K$, but a system of narrow bands shifted toward the longwave region. The interdistance between the centers of these bands equals the carbonyl frequency of anthraquinone. In powdered 1,4-anthraquinone dicarboxylic acid, reversible self-extinction of the luminescence was observed. This effect disappeared in dioxane solution. The self-extinction is explained by intermolecular interaction (and photo transfer) of one carboxyl proton with the p electrons of the oxygen in the anthraquinone carbonyl group, which effect electron excitation by $p \rightarrow \pi^*$ transition. This assumption was confirmed by measuring the IR frequency of the carbonyl group. There are 2 figures and 3 tables.

ASSOCIATION: Fiziko-khimicheskiy institut im. L. Ya. Karpova
                 (Physicochemical Institute imeni L. Ya. Karpov)
SUBMITTED: November 16, 1961
Card 2/2

SHIGORIN, D.N.; SHCHEGLOVA, N.A.; PISKUNOV, A.K.; OZEROVA, G.A.;
POKUNIKHIN, N.S.

H-bonds in excited electronic states of molecules with
π-electrons. Dokl. AN SSSR 150 no.4:862-865 Je '63.
(MIRA 16:6)

1. Fiziko-khimicheskiy institut imeni L.Ya. Karpova.
Predstavleno akademikom A.N. Tereninym.
(Molecular spectra)
(Hydrogen bonding)

L 32069-66   EWT(m)/EWP(j)   RM

ACC NR: AR6016172   SOURCE CODE: UR/0058/65/000/011/D012/D012

AUTHOR: Shigorin, D. N.; Shcheglova, N. A.; Piskunov, A. K.; Ozerova, G. A.   44

TITLE: Hydrogen bonds in excited electronic states of molecules with π-electrons   B

SOURCE: Ref. zh. Fizika, Abs. 11D83

REF SOURCE: Tr. Komis. po spektroskopii. AN SSSR, t. 3, vyp. 1, 1964, 302-312

TOPIC TAGS: hydrogen bonding, excited state, absorption spectrum, luminescence spectrum, nonmetallic organic derivative, conjugate bond system, ground state, luminescence quenching

ABSTRACT: On the basis of data on the absorption and luminescence spectra of α-oxy- and methoxy-derivatives of anthraquinone it is shown that the energy of production of the hydrogen bond in the excited state increases compared with the ground state by a factor of almost 2 and reaches 15 kcal. The increase in the energy of the H bond in the case of excitation with conjugated bonds is connected with the increase of the energy of the π-electron interaction in the quasiaromatic cycle, formed with participation of the p-orbit of the hydrogen atom of the X-H group. The question of the role of the H bond in processes of deactivation of the triplet state and luminescence quenching is considered. [Translation of abstract]

SUB CODE: 20, 07

Card 1/1

L 20106-65   EWT(m)/EWP(j)   Pc-4   BSD/SSD(c)/AFWL/ASD(a)-5/AS(mp)-2/APGC(b)/ESD(gs)
ACCESSION NR: AP4044439   RM   S/0076/64/038/008/1963/1972

AUTHOR: Shcheglova, N. A.(Moscow); Shigorin, D. N. (Moscow); Dokunikhin, N. S.
(Moscow)

TITLE: Luminescence and absorption spectra of alpha and beta hydroxyanthra-
quinones

SOURCE: Zhurnal fizicheskoy khimii, v. 38, no. 8, 1964, 1963-1972

TOPIC TAGS: hydroxyanthraquinone, absorption spectrum, luminescence spect-
rum, hydrogen bond, molecular excitation

ABSTRACT: The luminescence and absorption spectra of α- and β-hydroxy, di-
hydroxy and tetrahydroxyanthraquinones and some of their methoxy derivatives in
normal hydrocarbons were investigated in order to study the spectra of compounds,
containing intramolecular hydrogen bonds and their manifestation in the excited
electronic state. It was found that the shape and position of luminescence and ab-
sorption bands of a number of hydroxyanthraquinones and some of their methoxy
substituted derivatives in n-hydrocarbons at 77K depend on the number and posi-
tion of the hydroxy groups in the anthroquinone ring. The luminescence spectra

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L 20106-65
ACCESSION NR: AP4044439

of α-hydroxy, 1,5-dihydroxy, β-hydroxy and 2,6-dihydroxyanthraquinones are washed out and shifted toward the red. The washed-out nature of spectra is closely related to the shortened lifetime of the excited state of hydroxyanthraquinones as compared with anthraquinone. Both the luminescence and the absorption spectra of 1,4-dihydroxy, 1,2,5,8- and 1,4,5,8-tetrahydroxyanthraquinones have a vibrational fine structure. For these substances the established frequencies of purely electronic transitions are 19115 cm^{-1}, 18774 cm^{-1} and 17667 cm^{-1} respectively. The H bond has a significant effect on the nature of the excited state of the molecule. From the comparison of the spectra of α-hydroxy and α-methoxyanthraquinones it is apparent that the formation of H bond leads to the long wave length shift of absorption and luminescence spectra and also to the increase of the intensity of the long wavelength absorption bands. The energy of the H bond has been determined in the excited state for α-hydroxy derivatives of anthraquinones. The energy of the H bond greatly increases during the transition of the molecule into the excited electronic state, which is explained by the increase of the energy of π-electron interaction during the formation of quasiaromatic ring with H bond. Orig. art. has: 6 tables and 4 figures.

Card 2/3

L 20106-65
ACCESSION NR: AP4044439

ASSOCIATION: Fiziko-khimicheskiy institut im. L. Ya. Karpova (Institute of
Physical Chemistry)

SUBMITTED: 21Aug63   ENCL: 00

SUB CODE: GC, OP   NO REF SOV: 012   OTHER: 008

Card   3/3

L 16195-65   EWT(m)/EPF(c)/EWP(j)   Pc-4/Pr-4   RPL   WW/JFW/RM
ACCESSION NR: AP4046084   S/0076/64/038/009/2279/2283

AUTHOR: Shigorin, D. N.; Piskunov, A. K.; Ozerova, G. A.; Shcheglova, N. A.
Vereyn, N. V.

TITLE: The role of H-bonds in processes of deactivating activated states of mole-
cules leading to the formation of radicals

SOURCE: Zhurnal fizicheskoy khimii, v. 38, no. 9, 1964, 2279-2283

TOPIC TAGS: H bond, activated molecule, deactivation, radical formation, radi-
cal formation mechanism, intermolecular radical formation, EPR spectrum,
luminescence

ABSTRACT: The mechanism of radical formation and the role of H-bonds therein
was investigated in processes embodying intermolecular radical formation-- when
the activated molecules form complexes among themselves or with molecules of
the media. The EPR spectra and the luminescence were examined of a series of
systems: N-ethylacridone, anthraquinone and some of its derivatives, triphenyla-
mine, and carbazole, in different media in a molar ratio of 1:1 with $c=10^{-3}$ mol/l.

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L 16195-65
ACCESSION NR: AP4046084

Photo-illuminated powders under vacuum at 77K gave no EPR signal. In samples crystallized from ethanol and in luminophor systems X: ...H-O-R, a singlet appeared whose intensity increased proportionally to the intensity of illumination. Photoactivation of systems with the luminescent chromophore $>C=O$ gave a singlet and EPR spectra corresponding to radicals of the solvent. Photoactivation of systems containing the chromophoric atom $>N$, gave a weak singlet and intense spectra of the solvent radical (radical yield $\sim I^n$, $n \simeq 2$). If the $>N$ atom which formed a H-bond with the O-H groups did not affect the electron excitation, the radical yield was small. In solvents (hydrocarbons) which did not contain the X-H group capable of forming H-bonds, the luminophores did not give noticeable EPR signals. It was concluded the H-bond played an important role in the process of forming radicals from a matrix as a result of deactivating activated states of a molecule. This is a two-stage process (see enclosed figure). Formation of the radical complex takes place in the first stage as a result of the transition of the H atom from the molecule of the matrix to the luminophore molecule due to absorption of a quantum of light in $S \rightarrow S^* \rightsquigarrow T$ transitions. The radical complex is decomposed in the second stage forming radicals of the matrix due to absorption

Card 2/4

L 16195-65
ACCESSION NR: AP4046084

of a quantum of light in the $S_R \longrightarrow S_R^*$ transition. A network of matrix molecules connected by H-bonds is necessary for this. The yield of radicals in the overall process is proportional to the light intensity I^n, where $n \doteq 2$. The triplet activated state does not take part in the process of formation of radicals from the matrix. Orig. art. has: 1 table and 4 figures.

ASSOCIATION: Fiziko-khimicheskiy institut im. L. Ya. Karpova (Physical Chemical Institute)

SUBMITTED: 11Oct63   ENCL: 01

SUB CODE: GC   .   NO REF SOV: 005   OTHER: 000

Card 3/4

L 16195-65
ACCESSION NR: AP4046084
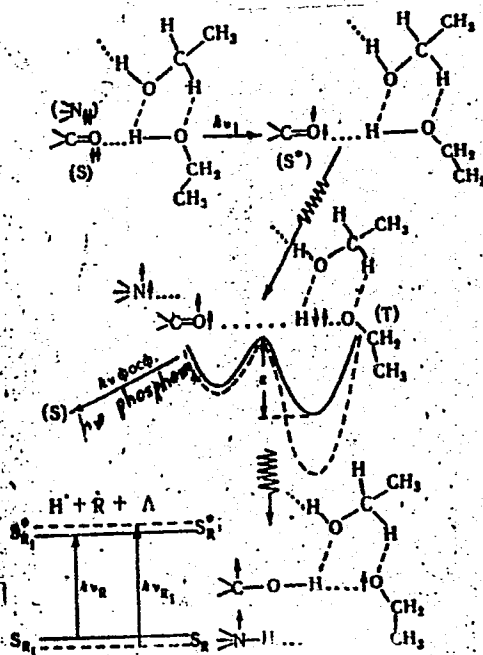
Card   4/4

SHIGORIN, D.N.; PICKTIN, A.K.; ... TA, ...A., ...TA, M.A.; VEREN, N.V.

Role of the H-bonding ... ...ases by ... ... are formed as a result of ... deactivation of ... excited spectrum states of molecules. Dokl. AN SSSR ... ... S.

(MIRA 17:10)

1. Fiziko-khimicheskiy ... ... Karpova. Predstavleno aka-demikom S.S.Medvedeva.

L 62934-65   EWT(1)/EWT(m)/EWP(j)   IJP(c)   RM

ACCESSION NR: AR5012283   UR/0058/65/000/003/D074/D074

SOURCE: Ref. zh. Fizika, Abs. 3D597

AUTHOR: Shcheglova, N. A.; Shigorin, D. I.

TITLE: Quasi-line luminescence spectra of aromatic diketones at 77°K

CITED SOURCE: Tr. Komis. po spektroskopii. AN SSSR, vyp. 1, 1964, 648-661

TOPIC TAGS: aromatic ketone, electron structure, electron energy level, line spectrum, luminescence spectrum, electron transition

TRANSLATION: Quasi-line luminescence spectra of aromatic diketones are studied. A vibrational analysis of the spectra is given; the nature of the electron transitions is determined and the positions of the electron levels are found. The effect of substituents on the emission and absorption spectra is examined.

SUB CODE: NP, GC   ENCL: 00

Card 1/1

1. F.itan... ... ... , submitted
Aug. 9, 190?

ACC NR: AP6010545   N   SOURCE CODE: UR/0069/65/027/006/0806/0809

AUTHOR: Vedernikova, N. F.; Sokolov, S. I.; Fel'dman, R. I.; Shchegolevskaya, N. A.

ORG: Moscow Institute of Chemical Machinery (Moskovskiy institut khimicheskogo mashinostroyeniya); Moscow Oblast Polytechnic Institute im. N. K. Krupskaya (Moskovskiy oblastnoy pedagogicheskiy institut)

TITLE: Interaction of polymers with plasticizers. Part 7. Thermooptical characteristics of the effect of plasticizers on polymethyl methacrylate

SOURCE: Kolloidnyy zhurnal, v. 27, no. 6, 1965, 806-909

TOPIC TAGS: plasticizer, polymethylmethacrylate, double refraction, phosphate ester

ABSTRACT: In order to clarify the specificity of the optical effect of plasticiza-tion, the simultaneous influence of plasticizers and temperature on the birefringence of binary systems composed of a polymer and a low-molecular plasticizer was investi-gated. Thermooptical measurements were made in the two systems polymethyl metha-crylate (PMMA)-dibutyl phosphate (DBP) and PMMA-tricresyl phosphate (TCP). The curve representing the temperature dependence of the optical birefringence coefficient C_q of polymethyl methacrylate (see Fig. 1 and 2) is shifted by the presence of the plasticizer in the direction of the tempera ure axis toward lower values, in con-formity with the mole fraction rule, and in the direction of the C_q axis toward more

UDC: 541.64:535.551

Card 1/3

L 34417-66
ACC NR: AP6010545   0
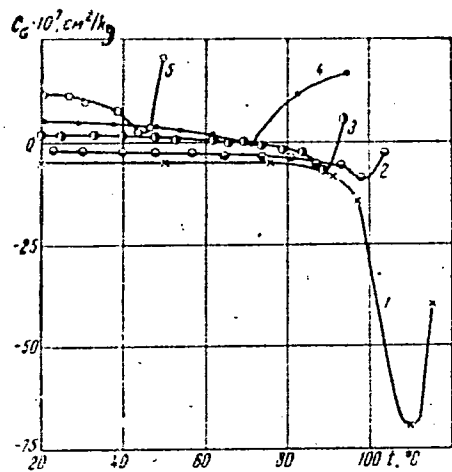
Fig. 1. Temperature dependence of C_{σ} of PMMA plasticized with TCP: 1 - PMMA; 2-5 - PMMA + TCP, N_2 equal to 0.014, 0.030, 0.062 and 0.113 respectively.
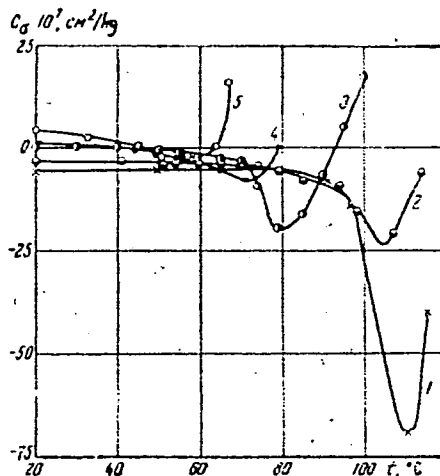
Fig. 2. Temperature dependence of C_{σ} of PMMA plasticized with DBP: 1 - PMMA; 2-5 - PMMA + DBP, N_2 equal to 0.011, 0.038, 0.056 and 0.097 respectively.

Card 2/3

L 34417-66

A-C NR: AP6010545

positive values. The shift along the C_g axis depends on the composition and structure of the plasticizer molecules. It is concluded that the influence of the plasticizers introduced into PMMA is dual in nature: in some respects, it is related to a change in the state of aggregation of the polymer upon addition of the plasticizer, and is governed by known general rules established by studying the mechanical properties; in other respects, the plasticizer affects the optical properties according to its individual characteristics, which depend on the composition and structure of its molecules. Orig. art. has: 3 figures.

SUB CODE: 07/ SUBM DATE: 26Jun64/ ORIG REF: 004/ OTH REF: 001

Card 3/3

SEREGLOVA, N.A.; SHIGORIN, D.N.; GORELIK, M.V.

Electronic spectra of aromatic α-diketones. Zhur. fiz. khim.
39 no.4:893-901 Ap '65.   (MIRA 19:1)

1. Fiziko-khimicheskiy institut imeni Karpova. Submitted Nov. 11,
1963.

MELAMED, Ya.P.; SHCHEGLOVA, N.G.

      Case of echinococcic hydatid cyst of hip muscles. Zdrav.Kazakh.
      22 no.11:70-71 '62.   (MIRA 16:2)

      1. Iz khirurgicheskogo otdeleniya zheleznodorozhnoy bol'nitsy
      g. Ural'ska.
                     (MUSCLES—HYDATIDS)

SHCHEGLOVA, N. S.

Production of economically valuable artificial mutations in
grain crops. Genetika no.2:143-147 Ag '65.   (MIRA 18:10)

1. Nauchno-issledovatel'skiy institut sel'skogo khozyaystva
TSentral'nykh rayonov nechernozemnoy zony, Moskovskaya oblast'.

SHCHEGLOVA, O. A.

SHCHEGLOVA, O. A. "Influence of Mechanical Decrease of Leaf Area
    On Development of the Plant, Accumulation of Dry Weight, and
    Yield of Grain of Spring Wheat and Barley," Trudy po Zashchite
    Rastenii, Seriia 3, no. 3, 1933, pp. 73-112. 423.92 L54C

SOURCE: SIRA SI 90-53, 15 Dec. 1953

CA

IID

Effect of a decrease in the leaf area on the crop yield and sugar content of sugar beets.   O. A. Shcheglova and N. N. Gortikova.   *Sovet. Botan.* 1938, 121-7; *Chimie & industrie* 42, 548.—The chem. and mech. deterioration of sugar-beet leaves results in a decrease both in crop yield and in sucrose content, irrespective of the age of the plant.

A. Papineau-Coiture

METALLURGICAL LITERATURE CLASSIFICATION

The relation of the energy of photosynthesis to the quantity of chlorophyll in leaves of buckwheat. O. A. Shcheglova. Expl. Botan. No. 4, Trudy Botan. Inst., Acad Sci. U. S. S. R., Ser. IV, 63 9(in English, 69-70)(1940). —Rate of photosynthesis was detd. by the eudiometric method; the gas analyses were made in the Bonnier and Mangin app.; chlorophyll content was detd. by the Lyubimenko spectro-colorimetric method. Photosynthesis seems to be more intense during the first half of the summer in the parts of the leaves contg. a small amt. of chlorophyll. In the second half of the summer the more green parts of the leaves show a higher photosynthetic activity. The phenomenon noted is assocd. with temp. effects, as shown experimentally.   J. S. Joffe

The role of environment on the photoperiodic reaction of short-day plants. E. Ya. Ermolaeva and O. A. Shcheglova. *Expl. Botan.* No. 5, *Trudy Botan. Inst. Acad. Sci. U.S.S.R.*, Ser. IV, 138 49(in English, 149 59)(1941). Data are presented showing the influence of light and temp. on the photoperiodic reaction of *Perilla oymoides*.

I. S. Ioffe

ASA-SLA METALLURGICAL LITERATURE CLASSIFICATION

110

Anthocyanin and plant development. E. Ya. Ermolaeva and O. A. Shchegluva, *Doklady Akad. Nauk S.S.S.R.* 60, 901-3(1948).—In expts. with *Perilla ocymoides* and *P. nankinensis* it was shown that on transition of the plants from the vegetative to the reproductive phase there occurs a sharp drop of anthocyanin (complete absence in the former plant), which may be interpreted as an index (or a criterion) for judging the developmental phase of the plant. Anthocyanin was detd. colorimetrically. In *P. nankinensis* the drop of anthocyanin reaches 45%.

G. M. Kosolapoff

ASM TEA   METALLURGICAL LITERATURE CLASSIFICATION

I YSL , F. F.; SHCHERLOVA, I. A. ,
PULIDENKOVA, A. F.

Botany - Physiology

Influence of light and temperature upon the distribution and variability of plants at
different stages of growth, Trudy Bot. inst. AN SSSR. EKsp. bot., No. 8, 1951.

2. MONTHLY LIST OF RUSSIAN ACCESSIONS, Library of Congress, March 1952, Uncl.

SHCHEGLOVA, O.A.; BEL'DENKOVA, A.F.

Effect of light and temperature factors on the readjustment and variabi-
lity of plants in the light of phasic development. Paper 5. Physiologi-
cal basis of extensive distribution of plants and the formation of new
forms. Trudy Bot.inst. Ser.4 no.9:37-62 '53.   (MLRA 6:6)

1. Botanicheskiy institut imeni V.L. Komarova akademii nauk SSSR.
                 (Phytogeography)   (Botany--Variation)

SHCHEGLOVA, O.A.; BEL'DENKOVA, A.F.; LEYSLE, F.F.; KORYAKINA, V.F.

Conditions of phasic development as one of the essential factors of geographic distribution of plants and their morphological changes. Izv.AN SSSR Ser.biol. no.4:52-74 Jl-Ag '53.   (MLRA 6:7)

1. Botanicheskiy institut Akademii nauk SSSR.
(Botany--Morphology) (Phytogeography)

SHCHEGLOVA, O.A.; LEYSLE, F.F.

Effect of the duration of daylight on the formation of vegetative
and reproductive buds in the elm. Dokl.AN SSSR 95 no.4:893-895
Ap '54.   (MLRA 7:3)

1. Botanicheskiy institut Akademii nauk SSSR. (Elm) (Budding)

YERMOLAYEV, K.F.; KULENOV, Kh.Kh.; SHCHEGLOVA, O.A.

 Methods of making quality-geometric map of complex metal deposits.
Trudy Alt.GMNII AN Kazakh.SSR 12:102-109 '62.   (MIRA 15:8)
       (Ore deposits--Maps)

SHCHEGLOVA, O. I.   231T15

USSR/Medicine - Cancer Diagnosis   Aug 52

"Clinical Microscopic Examination of the Re-
turns of Gastric Lavage, as a Diagnostic Method
for Gastric Cancer," O. I. Shcheglova, Novosi-
birsk, Hosp Therapeutic Clinic, Novosibirsk Med
Inst

"Klin Med" Vol 30, No 8, pp 81-83

Describes a new and simplified method of early
diagnosis in suspected cases of gastric malig-
nancy. Recommends use of this method for
diagnostic and prevention purposes.

231T15

SHCHEGLOVA, O.P.

Some glaciation features in the northern slope of the Alai Range.
Trudy Sagu no.28:51-56 '51.   (MLRA 9:5)
                    (Alai Range--Physical geography)

1. SHCHEGLOVA, O. P.

2. USSR (600)

4. Ice

7. Energy of freezing. Izv. vses. geog. obshch. 84 no. 5, 1952

9. Monthly List of Russian Accessions, Library of Congress, __January__ 1953. Unclassified.

SHCHEGLOVA, O.P.

Compiling the balance of a glacier. Trudy SAGU no.38:27-34 '53.
(MLRA 10:5)
(Glaciers)

SHCHEGLOVA,O.P.

    Rain-fed rivers of Central Asia. Trudy Tashk.geofiz.obser. no.10:
108-111 '54.   (MLRA 8:11)
    (Soviet Central Asia--Rivers) (Soviet Central Asia--Rain and
                                     rainfall)

SHCHEGLOVA, O.P.

One method of determining the elevation of the snow line.
Trudy SAGU no.50:43-47 '54.   (MIRA 9:7)
                    (Snow)

SHCHEGLOVA, O.P.

Method for determining the amount of rain water feeding the rivers
of Central Asia. Izv.AN Uz.SS^H no.2:71-77 '56.   (MLRA 10:3)
 (Uzbekistan--Rivers) (Rain and rainfall)

SHCHEGLOVA, A.P.

Variability in the rain water runoff of rivers in Central Asia. Dokl.
AN Uz.SSR no.11:41-43 '56.   (MIRA 13:6)

1. Sredneaziatskiy gosudarstvennyy universitet imeni V.I.Lenina
Predstavleno chlenom-korrespondentom AN UzSSR N.L.Korzhenevskim.
          (Soviet Central Asia--Runoff)

SHCHEGLOVA, O.P.

Development of theories concerning the glacier supply of rivers
in Central Asia. Izv.Uzb.fil.geog.ob-va no.3:15-21 '57.
(MIRA 11:4)

(Soviet Central Asia--Glaciers)
(Soviet Central Asia--Rivers)

SHCHEGLOVA, O.P.

Rain supply of rivers in Central Asia. Trudy Tashk.geofiz.obser. no.15:154-163 '57. (MIRA 10:11)

(Soviet Central Asia--Rivers)

SHCHEGLOVA, O.P.

Floods on Central Asian rivers from rain and thawing snow. Meteor. i
gidrol. no.1:40-43 Ja '58.   (MIRA 11:1)
                        (Asia, Central—Floods)

AUTHOR: Shcheglova, O. P.   SOV/12-90-6-7/23

TITLE: Two Flood Waters on the River Toguz-Bulak (Dva selya na
               saye Toguz-Bulak)

PERIODICAL: Izvestiya vsesoyuznogo geograficheskogo obshchestva, 1958,
               Vol 90, Nr 6, pp 541 - 543 (USSR)

ABSTRACT: The River Toguz-Bulak flows from the southern slope of the
               mountain range Kungey Ala Tau within the district of the
               Cholpan-Ata Settlement. In the summer, the water of the
               river is almost entirely absorbed by 2 canals which irri-
               ate the settlement farms and fields of the State Stud Farm.
               The remaining water flows out to the foot hill plain and
               reaches, underground, the Lake Issyk-Kul'. The river-
               bed, crossing the automobile road Rybach'ye - Przheval'sk
               within the precincts of the Settlement Cholpan-Ata, is
               usually dry in the summer. The author gives a brief phy-
               sico-geographical description of the river, and partic-
               ulars of the flood waters coming down the river on two oc-
               casions. There are 1 chart, 1 profile and 1 graph.

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SHCHEGLOVA, O.P.

      Naryn waters supplied by rain. Izv.Uzb.fil.Geog.ob-va 4:90-99
      '60.   (MIRA 13:7)
             (Naryn Valley--Rain and rainfall)

SHCHEGLOVA, O.P.

Classifying Central Asian rivers according to their types of water
supply. Izv.AN SSSR.Ser.geog. no.3:19-27 My-Je '61. (MIRA 14:5)

1. Sredneaziatskiy gosudarstvennyy universitet imeni V.I.Lenina.
   (Soviet Central Asia--Rivers)   (Runoff)

SHCHEGLOVA, O.P.; CHIRKOVA, A.A.

Roughness coefficients of rivers in the Chirchik Basin. Trudy
Sred.-Az.nauch.-issl.gidrometeor.inst. no.7:92-102 '61.
(MIRA 15:3)
(Chirchik Valley--Hydrology)

SHCHEGLOVA, O.P.

Runoff sources of river basins. Trudy TashGu no.185:69-81 '61.
(MIRA 14:12)

(Surkhan-Darya Province--Runoff)

SHCHEGLOVA, O.P.

Water turbidity and the phases of the water regime of mountain
rivers. Izv. AN SSSR. Ser.geog. no.1:91-95 Ja-F '63.

(MIRA 16:2)

1. Tashkentskiy gosudarstvennyy universitet im. V.I. Lenina.
   (Soviet Central Asia—Rivers)   (Silt)

SHCHEGLOVA, O.P.

Determining average perennial dates for the beginning and the
end of floods in mountain rivers. Nauch. trudy TashGU no.193:
107-112 '62.   (MIRA 16:7)

(Soviet Central Asia—Floods)

SHCHEGLOVA, U.P.

Average annual distribution of the runoff of suspended silt carried by the rivers of Central Asia. Nauch. trudy TashGU no. 213 Geography no. 24:13-18 '63.   (MIRA 17:5)

SHCHEGLOVA, O. P., kand. fiz.-matem. nauk; LUT, B. F.; MECHITOV, I. I.,
kand. tekhn. nauk (Tbilisi); IVERONOVA, I. M., kand. geograf.
nauk (Moskva); IOGANSON, V. Ye. (Moskva); LARIONOV, P. M.
(Uzhgorod)

Mud torrents. Prioroda 52 no.1:90-96 '6?.   (MIRA 16:1)

1. Tashkentskiy gosudarstvennyy universitet im. V. I. Lenina
for Shcheglova). 2. Baykal'skaya limnologicheskaya stantsiya,
poselok Listvenichnoye, Irkutskaya obl. (for Lut).

(Runoff)   (Erosion)

GRIGOR'EV, A.A., U.S.S.R.

Glaciation and glacial c eerings of the e Eurasian Rivers;
Geog. sbor. no.17 21-59 '64.   (MIRA 18-8,)

MIROSHNIKOV, L.D.; SHCHEGLOVA, O.S.

Mesozoic sediments of the northern Taymyr Peninsula and their coal potential. Trudy NIIGA 80:23-40 '58. (MIRA 14:11)

(Taymyr Peninsula--Coal geology)

SHCHEGLOVA, O.S.

Hexagonal prismatic jointing in coals. Izv.AN SSSR.Ser.geol.
24 no.12:91-95 D '59.   (MIRA 13:8)

1. Nauchno-issledovatel'skiy institut geologii Arktiki
Ministerstva geologii i okhrany nedr SSSR, Leningrad.
                (Coal geology)

MIROSHNIKOV, L. D., SHCHEGLOVA, O. S.

    Concentration of water-soluble sulfates on the Chelyuskin Peninsula.
Zap. Vses. min. ob-va 88 no.6:686-692 '59.   (MIRA 13:8)

    1. Institut geologii Arktiki, Leningrad.
             (Chelyuskin Cape--Sulfates)

MIROSHNIKOV, L.D.; CHCHEGLOVA, U.S.

Phosphorites of the Noril'sk region. Trudy MIRA 114: 8-83 '60.
(MIRA 13:11)

(Noril'sk region--Phosphorites)

3 (5)

AUTHORS: Miroshnikov, L. D., Kravtsov, A. G.,   SOV/20-126-2-37/64
Shcheglova, O. S.

TITLE: Stratigraphical Scheme of the Lower and Middle Paleozoic of
the North-western Edge of the Siberian Plateau (Skhema
stratigrafii nizhnego i srednego paleozoya severo-zapadnoy
okrainy Sibirskoy platformy)

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 126, Nr 2,
pp 359-362 (USSR)

ABSTRACT: The scheme of the pre-Tungusskiye sediments of the region
named in the title was hitherto very inaccurate (Refs 1, 2,
4 and G. D. Maslov 1946-1956) and in the course of time it
became doubtful (Ref 3). Between 1955-57, the authors studied,
according to the different strata the cross sections of the
above named formations in the district of Noril'sk. In the
course of these investigations 300 types of fossils were
determined and the following stratigraphical scheme was
established. After the middle Cambrian (110 meters thick)
there follows (upwards): 200 meters of the Dressbach stage
of the upper Cambrian (V. A. Markovskiy and others 1958). A
layer of fossil (up to 1000 meters thick) allows it to be

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Stratigraphical Scheme of the Lower and Middle   SOV/20-126-2-37/64
Paleozoic of the North-western Edge of the Siberian Plateau

brought into correlation with an American one, which
corresponds to the Frankonskiy stage of the Pacific Province.
The Cambrian is limited by 100 meters thick chalk, which
corresponds lithologically and with respect to its position
to the Trempil'onskiy stage of the North-American Plateau.
The oldest Ordovician deposits lie concordantly on the
River Omnutakh on red-colored Trempil'o rocks. Organic
remains are represented by Brachiopodes Finkelnburgia sp.
(determined by O. N. Andreyeva). This 75 meters thick layer is
eliminated as Ust'-Kutskiy stage of the Lower Ordovician
(Ref. 3). Higher on the Omnutakh, Chopko, Mokutey and other
rivers lies a 400 meters thick mass of the Lower Ordovician
(Fossil definition by V. A. Vostokova; collected by A. V.
Maksudov, determined by Z. G. Balashov). Still higher on the
River Omnutakh lie successive chalks of the Krivolutskaya
stage of the Middle Ordovician (Collected by G. A. Polyakova;
determined by A. F. Abushik and L. V. Nekhorosheva). In the
vicinity of the River Imangda rocks of the Mangazeyskaya stage
of the Middle Ordovician were discovered during boring
Card 2/4   operations (fossil-determination by Z. A. Maksimova and R. S.

Stratigraphical Scheme of the Lower and Middle   SOV/20-126-2-37/64
Paleozoic of the North-western Edge of the Siberian Plateau

Yeltysheva). Thickness 37-44 meters. On the Mangazeyskiy
stage there are deposited sediments of the Upper Llandovery.
There follows, Venlock with the lower and upper substage, and
Ludlov with the lower and upper substage. Thereupon lie
concordantly, loamy chalk of the Zhedinskiy stage of the
Lower-Devonian, 370-240 meters thick. Then Coblence stage of
the Lower Devonian, up to 75 meters thick, Eifel stage of the
Middle Devonian, 140-170 meters thick. Then there follows
the Givetian stage up to 130 meters thick, and the Frasnian
stage of the Upper Devonian of a thickness of 100 meters.
Fammenian stage lacks in section. On the Dolomites of the
Frasnian lies a mass of dark chalk (100 meters), which
according to definitions of fossils by A. N. Sokol'skaya
may belong to the Tournaisian stage of the Lower Carboniferous.
Still higher follows the continental Tungusskaya series. There
are 4 Soviet references.

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Stratigraphical Scheme of the Lower and Middle   SOV/20-126-2-37/64
Paleozoic of the North-western Edge of the Siberian Plateau

ASSOCIATION: Nauchno-issledovatel'skiy institut geologii Arktiki
                (Scientific Research Institute of Arctic Geology)

PRESENTED: January 23, 1959, by D. I. Shcherbakov, Academician

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